Lab 2  
  
**1. Under each of the six categories, shelter, health, water, education, energy and transport, choose one project which interests you. For each category, describe how it is designed to alleviate poverty for the project's stakeholders. (6 categories x 1 paragraph = 6 paragraphs)**

SHELTER: **GLOBAL VILLAGE SHELTER**

In cases of any global incidents that occur, such as earthquakes, hurricanes, tsunami’s etc this design alleviates poverty because a low cost temporary emergency shelters are built that can last up to eighteen months, which gives the people who are in need somewhere to live until they find a permanent placement. Since these shelters are easy to deploy, they have come with a design that really doesn’t need any hard labor or a level of education that is required to know how assemble the materials.

HEALTH: **SOLAR AID**

Since 10% of the world’s population suffers from disabling hearing impairments, and 80% of them live in developing countries, the stakeholders have come up with a device called the solar aid. Since most hearing aids run on batteries, which become very expensive, they have come up with a solar-powered hearing-aid battery charger, which is very beneficial for third world countries because it is affordable. This is a proficient device, which alleviates poverty because the battery doesn’t need to be continually replaced and everyone can afford it.

WATER: **BAMBOO TREADLE PUMP**

The bamboo treadle pump is an excellent design that alleviates poverty because it allows poor farmers to access groundwater during the dry season, which is an excellent design solution because it is reasonably priced and the materials are locally available. The pump can be manufactured locally by metalworking shops, which doesn’t require hard labor and it is easy to use. It is very economical, simple and accommodative design for especially for third world countries that need this, so this way they don’t suffer from the loss of water especially in dry season.

EDUCATION: **SOLAR HOME LIGHTING SYSTEMS**

Many third world countries are impacted because of the lack of electricity. The stakeholders have designed a device that not helps them with provide them with an affordable, convenient way of living but also something that will be beneficial to make their life easier, which alleviates poverty. The Solar home lighting system is a wireless solar power system originally designed for rural and urban people in third world countries, it helps families to improve their productivity by allowing them to practice income-generating activities in the evening while their children can have better light for studying.

ENERGY: **KENYA CERAMIC JIKO**

The Kenya Ceramic Jiko is a portable charcoal stove, reduces fuel consumption by 30-50% saving the consumer money, reducing toxic gas, harsh materials and resulting in better overall health for the user. Since it is a portable device, so it can be taken out the house where all the toxic fumes can be exposed outside the shelter, which is a healthier for the user. It alleviates poverty especially in third world countries because it uses less energy; it is healthier for the consumer and economically affordable.

TRANSPORT: **BIG BODA LOAD-CARRYING BICYCLE**

The Big Boda is able to carry hundreds of pounds of cargo or two additional passengers easily, at a significantly lower cost than other forms of human-powered utility vehicles. It functions to transport goods to and from market for entrepreneurs and consumers in developing countries. By adding a longer extended additional seat to the bike it becomes more of a productive use rather than only for pleasure. It alleviates poverty because these bikes are given multifunctional uses to it by being a having more than one person to travel (taxi), carry loads of materials from one place to the other, like an ambulance if someone is sick, etc.

2. **How does stakeholder analysis enable sustainable and socially responsible design? (1 paragraph)**

The stakeholder analysis enables sustainable and socially responsible design by taking surveys, questionnaires, polls, interviews, doing research projects and basically going around finding out what are some problems that occur in certain criteria’s. The stakeholders acknowledge these areas and try finding solutions, results, answers and explanations that help out the situation. They come up with designs that help out the environment and society with taking into considerations of all living circumstances. They test these projects out in certain locations and if it is productive and successful, they carry on these projects onto other locations. The main purpose of these projects is to enable success, content for the users and have a sense of safety.   
  
3**. List five characteristics of socially responsible product design. (List of 5 points)**

- make sure the projects are environmentally welcoming

-easily affordable and available

- increase and improve the quality of living

-have a dynamic way of communicating each other`s ideas, so that one another can be heard

-make sure that overall project will be beneficial, positive, practical and be helpful for the environment and to one`s needs.